This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Original) A compound that inhibits complement activation, which comprises a peptide having a sequence:

Xaa1 – Cys – Val – Xaa2 - Gln - Asp - Trp - Gly – Xaa3 - His - Arg – Cys – Xaa4 (SEQ ID NO:15);

wherein:

Xaa1 is Ile, Val, Leu, Ac-Ile, Ac-Val, Ac-Leu or a dipeptide comprising Gly-Ile;

Xaa2 is Trp or a peptidic or non-peptidic analog of Trp;

Xaa3 is His, Ala, Phe or Trp;

Xaa4 is L-Thr, D-Thr, Ile, Val, Gly, or a tripeptide comprising Thr-Ala-Asn, wherein a carboxy terminal –OH of any of the L-Thr, D-Thr, Ile, Val, Gly or Asn optionally is replaced by $-NH_2$; and

the two Cys residues are joined by a disulfide bond.

2. (Original) The compound of claim 1, wherein Xaa1 is Ac-Ile.

3. (Original) The compound of claim 1, wherein Xaa3 is Ala.

4. (Original) The compound of claim 1, wherein Xaa2 is an analog of Trp comprising a substituted or unsubstituted bicyclic aromatic ring component or two or more substituted or unsubstituted monocyclic aromatic ring components.

5. (Original) The compound of claim 4, wherein the analog of Trp is selected from the group consisting of 2-napthylalanine, 1-naphthylalanine, 2-indanylglycine carboxylic acid, dihydrotryptophan and benzoylphenylalanine.

6. (Original) The compound of claim 1, wherein Xaa1 is Ac-Ile, Xaa2 is Trp or an analog of Trp comprising a substituted or unsubstituted indole, naphthyl or dibenzoyl component, Xaa3 is Ala and Xaa4 is L-threonine or D-threonine.

7. (Original) The compound of claim 6, having a sequence selected from the group consisting of SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12 and SEQ ID NO:13.

8. (Original) The compound of claim 1, wherein Xaa1 is a dipeptide Gly-Ile, and Xaa 4 is a tripeptide Thr-Ala-Asn.

9. (Original) The compound of claim 8, comprising a peptide having SEQ ID NO:14.

10. (Withdrawn) A compound that inhibits complement activation, comprising a non-peptide or partial peptide mimetic of the compound of claim 1, wherein the compound binds C3 and inhibits complement activation with at least five-fold greater activity than does a peptide comprising SEQ ID NO:1, under equivalent assay conditions.

11. (Withdrawn) An isolated nucleic acid molecule encoding one or more peptides that inhibits complement activation, wherein the peptide comprises a sequence:

Xaa1 – Cys – Val – Xaa2 - Gln - Asp - Trp - Gly – Xaa3 - His - Arg – Cys – Xaa4 (SEQ ID NO:15);

wherein:

Xaa1 is Ile, Val, Leu, or a dipeptide comprising Gly-Ile;

Xaa2 is Trp;

Xaa3 is His, Ala, Phe or Trp; and

Xaa4 is L-Thr, D-Thr, Ile, Val, Gly, or a tripeptide comprising Thr-Ala-Asn; wherein the two Cys residues are joined by a disulfide bond.

12. (Withdrawn) The isolated nucleic acid molecule of claim 11, encoding a peptide wherein Xaa3 is Ala.

13. (Withdrawn) The isolated nucleic acid molecule of claim 12, encoding a peptide comprising SEQ ID NO:14.

14. (Withdrawn) The isolated nucleic acid molecule of claim 13, encoding a concatemer of two or more of a peptide comprising SEQ ID NO:14, wherein the encoded concatemer is cleavable by hydrazine to form a multiplicity of peptides comprising SEQ ID NO:14.

15. (Withdrawn) An expression vector comprising the isolated nucleic acid molecule of claim 11.

16. (Withdrawn) A cell comprising the expression vector of claim 15.

17. (Withdrawn) The cell of claim 16, which is a bacterial, fungal, plant, insect or mammalian cell.